

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

III. REMARKS

In the outstanding Office Action, at ¶1, the examiner acknowledges applicant's election to prosecute claims 1-30. Claims 31-58 have been cancelled herein, without prejudice.

In ¶2 of the Office Action, the examiner objects to the drawings on grounds that "Reference number 51" is not mentioned in the description. However, in the specification, at p. 23, line 2, the operation of the plunger 64 is described as including:

...while valve V4 is opened to exhaust 51,
thus driving the plunger 64 back to its start
position,

Thus, exhaust line 51 is described in the specification and shown in the drawings e.g., see Figs. 3-18. Withdrawal of this objection to the drawings is requested.

The Abstract was also objected to in ¶3 of the Office Action, and those deficiencies have been corrected by the new Abstract as discussed above and submitted herewith.

In ¶5 of the Office Action, the examiner rejects claims 1-2, 12 and 23-28 under 35 USC §102 as anticipated by Ehinger. In support of these rejections, the examiner urges that Ehinger discloses an electrostatic sprayer, carried robotically, and

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

"...an electrically insulative storage tank (item 6) for said coating product in valved fluid communication (by material changer 9 and connections 12 and 13) with said sprayer and connected to and positioned downstream from a length of electrically insulative supply conduit (the conduit between item 13 and item 6), said length of supply conduit connected to said distribution circuit (via quick connections 12 and 13)..., and including means for cleaning a portion (the recited solvent reads on the cleaning means), including all, of said length of supply conduit, in situ,

(Office Action, pp. 3-4)

With reference to Ehinger, at col. 2 to col. 3, and referring to Fig. 1 thereof, the high voltage assembly 11 is installed in the movable carriage 3 and connected to the sprayer 8. The coating material tank 9 has rapid connector means 12 attached thereto which is "capable of cooperating with complimentary rapid connecting means 13," which, in turn, "communicates" with Ehinger's supply tank 6.

Nothing in Ehinger discloses that "the conduit between item 13 and item 6" is, or is not, electrically insulative. Moreover, in Ehinger's spraying operation, there is no connection between the connectors 12 and 13, which are active only when filling the

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

tank 6. The conduit between item 13 and item 6, thus, has no function whatsoever and is, in fact, disconnected from Ehinger's apparatus *during* the spraying and cleaning operations, or, in other words, during spraying and cleaning, *in situ*.

The rapid disconnect 12 of Ehinger, which connects to rapid connect 13, is connected and disconnected by "two movements", first a rotation of the support 5, and second a translation in space of the entire assembly 9, all in order to connect the outlet 12 of assembly 9 to the supply tank 6 by connection of the rapid connection means 12 and 13. (Col. 3, lines 23 et. seq.). Ehinger states:

These operations take place from the end of the coating phase while the arm 4 is in movement.

(Col. 3, l. 26)

Ehinger's multiple movement and connect/disconnect maneuvers and components have no remote relevance to applicant's *in situ* filling-spraying-cleaning apparatus, all in addition to electrically isolating the spray head during spraying.

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

Webster's Ninth New Collegiate Dictionary defines "in situ"
as

...in position, ... or, in the original position.

That is the clear meaning of the usage of this term in applicant's claim 1, and is to be contrasted with Ehinger's disclosed connect/disconnect apparatus.

To summarize Ehinger's spraying operation, coating material is supplied to sprayer 8 from on-board supply tank 6 while the sprayer is **disconnected** from the supply tank 9 (col. 3, l. 9). During spraying, high voltage is applied to the sprayer 8 and tank 6 which are isolated from ground resulting from the *disconnect* between the connectors 12 and 13. To refill tank 6 requires two mechanical movements, namely, support 5 rotates, indicated by arrow R, and, simultaneously, the tank 9 translates in space linearly, indicated by arrow T, these **two** movements effecting connection of tank 6 to tank 9 for refilling after spraying.

Importantly, electrical isolation of Ehinger's sprayer is effected by the mechanical movement of tank 9 relative to tank 6 and disconnecting the connection means 12 and 13. At col. 3, line 51, Ehinger states:

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

In the case of electrostatic application of a conductive coating material, it is sufficient to cut off the high voltage supply for the sprayer 8 before coupling the connection means 12 and 13.

Contrast the *disconnect* of Ehinger's connectors 12 and 13 to achieve electrical isolation with the applicant's apparatus for the "in situ", direct cleaning of all conductive material from a portion of the supply line to effect this result. In fact, Ehinger's apparatus is not remotely related to applicant's apparatus by any stretch of anyone's imagination.

Applicant's invention as set out in claim 1, therefore, is not anticipated by Ehinger within the meaning of §102.

As to claim 2, the examiner asserts that Ehinger's conduit between 13 and 6 are formed within a unitary housing. Nothing in Ehinger describes such a structure, but this appears to be a minor point. Applicant concedes that claim 2 stands or falls with patentability of claim 1 on which it depends. The same concessions are proposed for claims 12, and 23-28, i.e., their patentability stands or falls with that of claim 1. Note that the last sentence of ¶5 of the Office Action appears to have been truncated prematurely. The full meaning and import of this incomplete statement are therefore not clear. Clarification is respectfully requested.

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

Because the claimed invention is not disclosed in Ehinger in all significant detail, there clearly can be no anticipation as a matter of law. For a rejection under 35 U.S.C. § 102 to be sustained, a single prior art reference must contain all elements of the claimed invention. *W. L. Gore & Associates, Inc., v. Garlock, Inc.*, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983), *Soundsciber Corp. v. U.S.*, 360 F.2d. 954, 960, 148 U.S.P.Q. 298, 301, adopted, 149 U.S.P.Q. 640 (Ct. Claims 1966). Such is not the case here. Withdrawal of the rejections under 35 U.S.C. § 102 is therefore respectfully requested.

At ¶s 6-9 of the outstanding Office Action, claims 3-4 and 14-22 have been rejected under 35 USC §103 as "obvious" and therefore not patentable in view of the primary Ehinger reference taken with secondary references to Baba, Rehman and Giroux. For all of the reasons set out above, the Ehinger reference has little relevance to applicant's invention, inasmuch as it discloses none of the key components of applicant's apparatus.

In *Ecolochem, Inc. v. Southern California Edison Company*, 227 F.3d 1361; 56 USPQ 2d 1065 (Federal Circuit, 2000), the Federal Circuit recently stated:

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

We "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." [omitting cases]

Our case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references [omitting cases]

(p. 1372)

. . .

In *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002), the Court expressly held that reliance on "common knowledge and common sense" **did not fulfill the PTO's obligation** to cite with specificity to record references to support its conclusions. *Id.* at 1344, 61 USPQ2d at 1434. Moreover, the PTO **must document its reasoning on the record** in order to allow for later accountability. *Id.* at 1345, 61 USPQ2d at 1435. This documentation allows effective judicial review. *Id.* In view of the remarks hereinabove, the Ehinger reference becomes moot. Because nothing in Ehinger combined with the secondary references will produce applicant's apparatus, the analysis should end there. There is no suggestion, teaching or motivation apparent in these references to combine them to achieve applicant's apparatus. *Ecolochem, supra.*

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

In support of an obviousness rejection, knowledge "clearly present in the prior art" must be shown. *In re Sheckler*, 438 F.2d 999, 168 U.S.P.Q. 716 (CCPA 1971); *In re Sernaker*, 217 U.S.P.Q. 1, 6 (Fed. Cir. 1983). The Court in *Sernaker*, *supra*, said:

The lesson of this case appears to be that prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from their teachings.

(*Sernaker*, p. 6)

The required suggestion does not exist in the art of record.

The instant invention is therefore **nonobvious** in view of the art of record as a matter of law.

Withdrawal of all rejections under both §102 and §103, and allowance of all claims 1-28 are respectfully requested.

Allowable Subject Matter

At p. 8 of the outstanding Office Action, the examiner indicates that claims 5-11 and 13 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form, including all limitations of the

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

base and intervening claims. For all of the reasons set out above, applicant believes the base claim 1 is patentably distinct from the known prior art, and so presently declines to recast these dependent claims 5 et. seq. in independent form. The examiner's comments regarding these claims are very much appreciated, however, and applicant offers further explanatory comments in what follows.

A key contribution to the art of applicant's invention lies in providing galvanically isolated spray means, including storage means, in extremely close proximity to the point of robotic application of the coating material. This is coupled with efficient charging of coating materials, such as electrically conductive paint in an automobile vehicle paint room assembly line. See, e.g., the specification at pp. 1-4, especially the discussion at p. 4 of French Patent 2,572,662. The French patent discloses that galvanic isolation is re-established after filling the intermediate tank by draining and drying a sufficient length of conduit upstream of the intermediate storage tank and then commencing painting, a method described as "not practical" by patentee, whose assignee is also that of the Ehinger reference.

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

The French patent describes a kind of "variation on a theme" set out in the earlier Ehinger patent. In addition, as the examiner points out, membrane containers are known, which are housed in separate storage tanks and essentially function as paint supply cartridges (see Office Action, p. 8, and citations therein), as shown in Giroux et al. for example. While applicant disputes the relevance of the Ehinger reference as set out above, that reference and others in the art do disclose spray applicators, paint sources, insulated storage tanks, deformable membrane containers, and cleaning and drying of a length of supply conduit to break electrical continuity during spraying. In distinction from all this art, applicant's apparatus provides spraying, storage and electrical isolation means (cleaning) *in situ*, all advantageously carried by and within the robotic spraying arm. See claim 1. Accordingly, claim 1 and all claims 2-28 dependent thereon are patentable, for all of the reasons presented hereinabove.

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

Claims 29-30 Stand Allowed

The examiner has allowed claims 29 and 30 (Office Action, p. 9). That is appreciated by the applicant.

IV. CONCLUSION

Under the facts of this case and the law, all of applicant's claims 1-30, as amended, are allowable. *Graham, Gore, Sernaker, Ecolochem, Lee, supra.* Early issuance of a formal Notice of Allowance is urged.

Respectfully submitted,

E. ALAN UEHLER, P.A.



E. Alan Uebler, Reg. No. 26,594
Attorney for Applicant
Lindell Square, Suite 4
1601 Milltown Road
Wilmington, DE 19808
(302) 998-9400

Date: June 3, 2005

In re patent application of:
Gunnar van der Steur
USSN: 10/733,939
APPARATUS AND METHOD FOR
ELECTROSTATIC SPRAYING OF
CONDUCTIVE COATING MATERIALS

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this AMENDMENT is being sent by facsimile transmission to (703) 872-9306 and the original is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to:

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

on this 3rd day of June, 2005.

By: 

E. Alan Uebler
Reg. No. 26,594